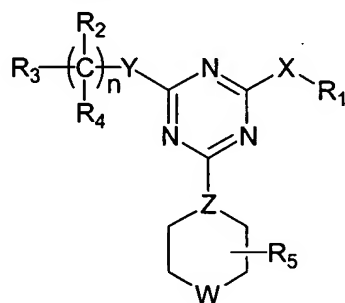


## AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

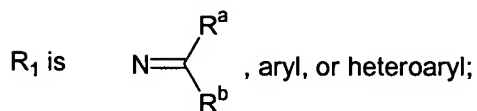
1-46. (Canceled)

47. (Currently amended) A method for treating an interleukin-12 overproduction-related disorder, wherein the disorder is rheumatoid arthritis, sepsis, Crohn's disease, multiple sclerosis, psoriasis, or insulin-dependent diabetes mellitus, comprising administering to a subject in need thereof the compound of formula (I):



(I),

wherein



each of  $R_2$ ,  $R_4$ , and  $R_5$ , independently, is  $R^c$ , halogen, nitro, nitroso, cyano, azide, isothionitro,  $SR^c$ , or  $OR^c$ ;

$R_3$  is  $R^c$ , alkenyl, alkynyl, aryl, heteroaryl, cyclyl, heterocyclyl,  $OR^c$ ,  $OC(O)R^c$ ,  $SO_2R^c$ ,  $S(O_2)R^c$ ,  $S(O_2)NR^cR^d$ ,  $SR^c$ ,  $NR^cR^d$ ,  $NR^cCOR^d$ ,  $NR^cC(O)OR^d$ ,  $NR^cC(O)NR^cR^d$ ,  $NR^cSO_2R^d$ ,  $COR^c$ ,  $C(O)OR^c$ , or  $C(O)NR^cR^d$ ;

$n$  is 0, 1, 2, 3, 4, 5, 6, or 7;

$X$  is O, S,  $S(O)$ ,  $S(O_2)$ , or  $NR^c$ ;

Y is a covalent bond, CH<sub>2</sub>, C(O), C=N-R<sup>c</sup>, C=N-OR<sup>c</sup>, C=N-SR<sup>c</sup>, O, S, S(O), S(O<sub>2</sub>), or NR<sup>c</sup>;

Z is N or CH; and

W is O, S, S(O), S(O<sub>2</sub>), NR<sup>c</sup>, or NC(O)R<sup>c</sup>;

in which each of R<sup>a</sup> and R<sup>b</sup>, independently, is H, alkyl, aryl, heteroaryl; and each of R<sup>c</sup> and R<sup>d</sup>, independently, is H, alkyl, or alkylcarbonyl; or a pharmaceutically acceptable salt thereof.

48. (Canceled)

49. (Previously presented) The method of claim 47, wherein the disorder is rheumatoid arthritis.

50. (Previously presented) The method of claim 47, wherein the disorder is Crohn's disease.

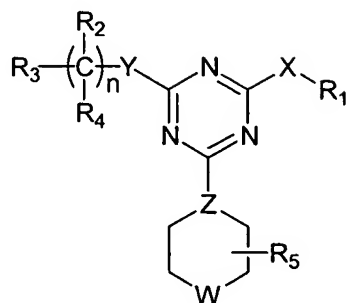
51. (Previously presented) The method of claim 47, wherein the disorder is multiple sclerosis.

52. (Previously presented) The method of claim 47, wherein the disorder is psoriasis.

53. (Previously presented) The method of claim 47, wherein the disorder is diabetes mellitus.

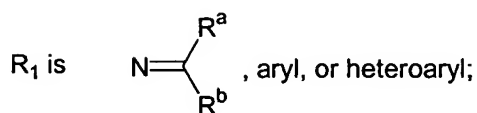
54. (Previously presented) The method of claim 47, wherein the disorder is sepsis.

55. (Currently amended) A pharmaceutical composition comprising the compound of formula (I):



(I),

wherein



each of  $R_2$ ,  $R_4$ , and  $R_5$ , independently, is  $R^c$ , halogen, nitro, nitroso, cyano, azide, isothionitro,  $SR^c$ , or  $OR^c$ ;

$R_3$  is  $R^c$ , alkenyl, alkynyl, aryl, heteroaryl, cyclyl, heterocyclyl,  $OR^c$ ,  $OC(O)R^c$ ,  $SO_2R^c$ ,  $S(O_2)R^c$ ,  $S(O_2)NR^cR^d$ ,  $SR^c$ ,  $NR^cR^d$ ,  $NR^cCOR^d$ ,  $NR^cC(O)OR^d$ ,  $NR^cC(O)NR^dR^d$ ,  $NR^cSO_2R^d$ ,  $COR^c$ ,  $C(O)OR^c$ , or  $C(O)NR^cR^d$ ;

$n$  is 0, 1, 2, 3, 4, 5, 6, or 7;

$X$  is O, S,  $S(O)$ ,  $S(O_2)$ , or  $NR^c$ ;

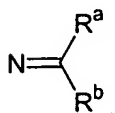
$Y$  is a covalent bond,  $CH_2$ ,  $C(O)$ ,  $C=N-R^c$ ,  $C=N-OR^c$ ,  $C=N-SR^c$ , O, S,  $S(O)$ ,  $S(O_2)$ , or  $NR^c$ ;

$Z$  is N or CH; and

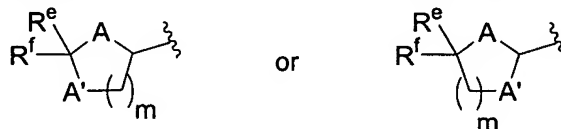
$W$  is O, S,  $S(O)$ ,  $S(O_2)$ ,  $NR^c$ , or  $NC(O)R^c$ ;

in which each of  $R^a$  and  $R^b$ , independently, is H, alkyl, aryl, heteroaryl; and each of  $R^c$  and  $R^d$ , independently, is H, alkyl, or alkylcarbonyl; or a pharmaceutically acceptable salt thereof; and a pharmaceutically acceptable carrier.

56. (Previously presented) The pharmaceutical composition of claim 55, wherein  $R_1$  is



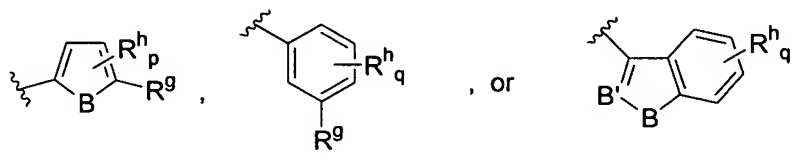
57. (Previously presented) The pharmaceutical composition of claim 56, wherein W is O.
58. (Previously presented) The pharmaceutical composition of claim 57, wherein  $R_5$  is H or alkyl.
59. (Previously presented) The pharmaceutical composition of claim 56, wherein X is  $NR^c$ .
60. (Previously presented) The pharmaceutical composition of claim 59, wherein  $R^c$  is H, methyl, ethyl, or acetyl.
61. (Previously presented) The pharmaceutical composition of claim 56, wherein Y is O or  $CH_2$ , and n is 0, 1, 2, 3, or 4.
62. (Previously presented) The pharmaceutical composition of claim 61, wherein  $R_3$  is aryl or heteroaryl.
63. (Previously presented) The pharmaceutical composition of claim 62, wherein  $R_3$  is pyridinyl.
64. (Previously presented) The pharmaceutical composition of claim 61, wherein  $R_3$  is  $OR^c$ ,  $SR^c$ ,  $C(O)OR^c$ , or  $C(O)NR^cR^d$ .
65. (Previously presented) The pharmaceutical composition of claim 61, wherein  $R_3$  is



in which each of A and A', independently, is O, S, or NH;  
each of  $R^e$  and  $R^f$ , independently is H, alkyl, aryl, or heteroaryl; and

m is 1 or 2.

66. (Previously presented) The pharmaceutical composition of claim 56, wherein one of  $R^a$  and  $R^b$  is



in which

B is  $NR^i$ , O, or S;

B' is N or  $CR^i$ ;

$R^g$  is H, alkyl, or alkoxyl;

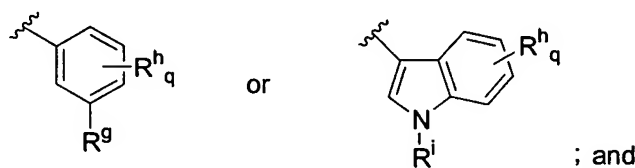
$R^h$  is halogen, CN, hydroxyl, alkyl, aryl, heteroaryl, alkoxyl, aryloxy, or heteroaryloxy;

$R^i$  is H, alkyl, or alkylcarbonyl;

p is 0, 1, or 2; and

q is 0, 1, 2, 3, or 4.

67. (Previously presented) The pharmaceutical composition of claim 66, wherein one of  $R^a$  and  $R^b$  is



the other of  $R^a$  and  $R^b$  is alkyl.

68. (Previously presented) The pharmaceutical composition of claim 67, wherein  $R^g$  is H, methyl, ethyl, methoxy, or ethoxy;  $R^h$  is F, Cl, CN, methoxy, methyl, or ethoxy;  $R^i$  is H, methyl, ethyl, or acetyl, and q is 0, 1, or 2.

69. (Previously presented) The pharmaceutical composition of claim 68, wherein  $R^g$  is methyl or methoxy;  $R^i$  is H; and q is 0.

70. (Previously presented) The pharmaceutical composition of claim 68, wherein W is O; and R<sub>5</sub> is H or alkyl.

71. (Previously presented) The pharmaceutical composition of claim 70, wherein X is NR<sup>c</sup>; and R<sup>c</sup> is H, methyl, ethyl, or acetyl.

72. (Previously presented) The pharmaceutical composition of claim 71, wherein Y is O or CH<sub>2</sub>; and n is 0, 1, 2, 3, or 4.

73. (Previously presented) The pharmaceutical composition of claim 72, wherein R<sub>3</sub> is aryl or heteroaryl.

74. (Previously presented) The pharmaceutical composition of claim 73, wherein R<sub>3</sub> is pyridinyl.

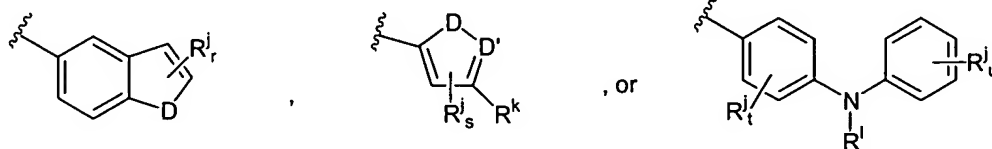
75. (Previously presented) The pharmaceutical composition of claim 68, wherein Y is O or CH<sub>2</sub>, and n is 0, 1, 2, 3, or 4.

76. (Previously presented) The pharmaceutical composition of claim 75, wherein R<sub>3</sub> is aryl or heteroaryl.

77. (Previously presented) The pharmaceutical composition of claim 76, wherein R<sub>3</sub> is pyridinyl.

78. (Previously presented) The pharmaceutical composition of claim 55, wherein R<sub>1</sub> is aryl or heteroaryl.

79. (Previously presented) The pharmaceutical composition of claim 77, wherein R<sub>1</sub> is



in which D is O, S, or NR<sup>m</sup>;

D' is N or CR<sup>m</sup>;

$R^j$  is halogen, CN, hydroxyl, alkyl, aryl, heteroaryl, alkoxyl, aryloxyl, or heteroaryloxyl;

$R^k$  is aryl or heteroaryl;

$R^l$  is H, alkyl, or alkylcarbonyl;

$R^m$  is H, alkyl, or alkylcarbonyl;

$r$  is 0, 1, or 2;

$s$  is 0 or 1;

$t$  is 0, 1, 2, 3, or 4; and

$u$  is 0, 1, 2, 3, 4, or 5.

80. (Previously presented) The pharmaceutical composition of claim 79, wherein X is  $NR^c$ ; and  $R^c$  is H, methyl, ethyl, or acetyl.

81. (Previously presented) The pharmaceutical composition of claim 80, wherein W is O; and  $R_5$  is H or alkyl.

82. (Previously presented) The pharmaceutical composition of claim 81, wherein Y is O or  $CH_2$ ; and  $n$  is 0, 1, 2, 3, or 4.

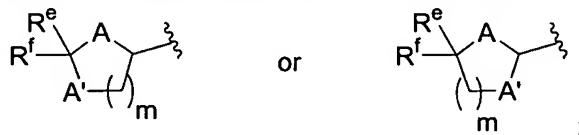
83. (Previously presented) The pharmaceutical composition of claim 79, wherein Y is O or  $CH_2$ ; and  $n$  is 0, 1, 2, 3, or 4.

84. (Previously presented) The pharmaceutical composition of claim 83, wherein  $R_3$  is aryl or heteroaryl.

85. (Previously presented) The pharmaceutical composition of claim 84, wherein  $R_3$  is pyridinyl.

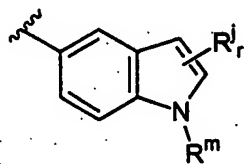
86. (Previously presented) The pharmaceutical composition of claim 83, wherein  $R_3$  is  $OR^c$ ,  $SR^c$ ,  $C(O)OR^c$  or  $C(O)NR^cR^d$ .

87. (Previously presented) The pharmaceutical composition of claim 83, wherein  $R_3$  is



in which each of A and A', independently, is O, S, or NH;  
 each of  $R^e$  and  $R^f$ , independently is H, alkyl, aryl, or heteroaryl; and  
 m is 1 or 2.

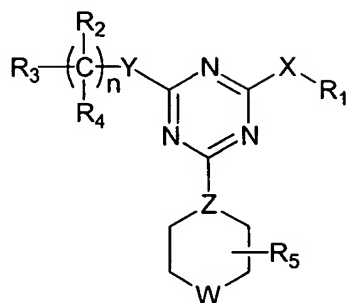
88. (Previously presented) The pharmaceutical composition of claim 83, wherein  $R_1$  is



89. (Previously presented) The pharmaceutical composition of claim 88, wherein  $R^j$  is methyl, ethyl, propyl, or benzyl; and r is 1 or 2.

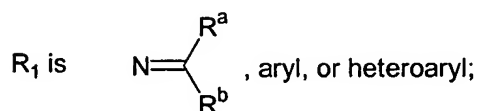
90. (Currently amended) The pharmaceutical composition comprising the compound of formula (I):





(I),

wherein



each of  $\text{R}_2$ ,  $\text{R}_4$ , and  $\text{R}_5$ , independently, is  $\text{R}^c$ , halogen, nitro, nitroso, cyano, azide, isothionitro,  $\text{SR}^c$ , or  $\text{OR}^c$ ;

$\text{R}_3$  is  $\text{R}^c$ , alkenyl, alkynyl, aryl, heteroaryl, cyclyl, heterocyclyl,  $\text{OR}^c$ ,  $\text{OC(O)R}^c$ ,  $\text{SO}_2\text{R}^c$ ,  $\text{S(O}_2\text{)R}^c$ ,  $\text{S(O}_2\text{)NR}^c\text{R}^d$ ,  $\text{SR}^c$ ,  $\text{NR}^c\text{R}^d$ ,  $\text{NR}^c\text{COR}^d$ ,  $\text{NR}^c\text{C(O)OR}^d$ ,  $\text{NR}^c\text{C(O)NR}^c\text{R}^d$ ,  $\text{NR}^c\text{SO}_2\text{R}^d$ ,  $\text{COR}^c$ ,  $\text{C(O)OR}^c$ , or  $\text{C(O)NR}^c\text{R}^d$ ;

$n$  is 0, 1, 2, 3, 4, 5, 6, or 7;

$\text{X}$  is O, S,  $\text{S(O)}$ ,  $\text{S(O}_2\text{)}$ , or  $\text{NR}^c$ ;

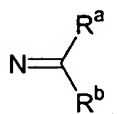
$\text{Y}$  is a covalent bond,  $\text{CH}_2$ ,  $\text{C(O)}$ ,  $\text{C=N-R}^c$ ,  $\text{C=N-OR}^c$ ,  $\text{C=N-SR}^c$ , O, S,  $\text{S(O)}$ ,  $\text{S(O}_2\text{)}$ , or  $\text{NR}^c$ ;

$\text{Z}$  is CH; and

$\text{W}$  is O, S,  $\text{S(O)}$ ,  $\text{S(O}_2\text{)}$ ,  $\text{NR}^c$ , or  $\text{NC(O)R}^c$ ;

in which each of  $\text{R}^a$  and  $\text{R}^b$ , independently, is H, alkyl, aryl, heteroaryl; and each of  $\text{R}^c$  and  $\text{R}^d$ , independently, is H, alkyl, or alkylcarbonyl; or a pharmaceutically acceptable salt thereof; and a pharmaceutically acceptable carrier.

91. (Previously presented) The pharmaceutical composition of claim 90, wherein  $\text{R}_1$  is

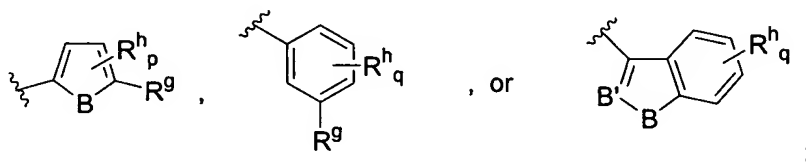


92. (Previously presented) The pharmaceutical composition of claim 91, wherein W is O; and R<sub>5</sub> is H or alkyl.

93. (Previously presented) The pharmaceutical composition of claim 91, wherein X is NR<sup>c</sup>; and R<sup>c</sup> is H, methyl, ethyl, or acetyl.

94. (Previously presented) The pharmaceutical composition of claim 91, wherein Y is O or CH<sub>2</sub>, and n is 0, 1, 2, 3, or 4.

95. (Previously presented) The pharmaceutical composition of claim 91, wherein one of R<sup>a</sup> and R<sup>b</sup> is



in which B is NR<sup>i</sup>, O, or S;

B' is N, CH, or CR<sup>i</sup>;

R<sup>g</sup> is H, alkyl, or alkoxyl;

R<sup>h</sup> is halogen, CN, hydroxyl, alkyl, aryl, heteroaryl, alkoxyl, aryloxyl, or heteroaryloxyl;

R<sup>i</sup> is H, alkyl, or alkylcarbonyl;

p is 0, 1, or 2; and

q is 0, 1, 2, 3, or 4.

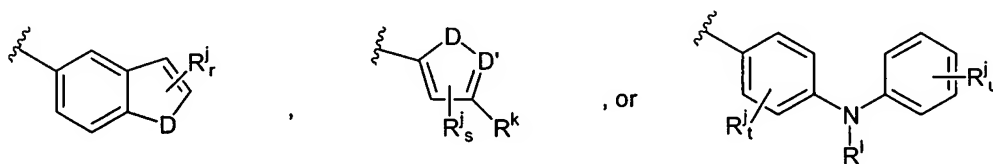
96. (Previously presented) The pharmaceutical composition of claim 90, wherein R<sub>1</sub> is aryl or heteroaryl.

97. (Previously presented) The pharmaceutical composition of claim 96, wherein W is O; and R<sub>5</sub> is H or alkyl.

98. (Previously presented) The pharmaceutical composition of claim 96, wherein X is  $\text{NR}^c$ ; and  $\text{R}^c$  is H, methyl, ethyl, or acetyl.

99. (Previously presented) The pharmaceutical composition of claim 96, wherein Y is O or  $\text{CH}_2$ ; and n is 0, 1, 2, 3, or 4.

100. (Previously presented) The pharmaceutical composition of claim 96, wherein  $\text{R}_1$  is



in which D is O, S, or  $\text{NR}^m$ ;

$\text{D}'$  is N or  $\text{CR}^m$ ;

$\text{R}^j$  is halogen, CN, hydroxyl, alkyl, aryl, heteroaryl, alkoxy, aryloxy, or heteroaryloxy;

$\text{R}^k$  is aryl or heteroaryl;

$\text{R}^l$  is H, alkyl, or alkylcarbonyl;

$\text{R}^m$  is H, alkyl, or alkylcarbonyl;

r is 0, 1, or 2;

s is 0 or 1;

t is 0, 1, 2, 3, or 4; and

u is 0, 1, 2, 3, 4, or 5.